

SYSTEM **P**LANNING & **A**NALYSIS **R**eport

S-45

T. H. 51
T. H. 5 TO PIERCE-BUTLER ROUTE

S. P. 6215

MARCH, 1971

PREPARED BY
OFFICE OF SYSTEM PLANNING



**MINNESOTA
DEPARTMENT
OF HIGHWAYS**

Office Memorandum

TO : Paul G. Velz
Road Design Engineer

DATE: March 26, 1971

FROM : Morris Gildemeister, Chief
Statewide Planning Section

SUBJECT: TH 51, TH 5 to Pierce Butler Route
SP 6215
System Planning & Analysis Report S-45

The Statewide Planning Section transmits this report in response to C. A. Siggerud's June 28, 1970 request for 1990 HCADT for the project location shown on the map on page 2.

For each numbered segment on the map on page 3, the following data are tabulated on pages 4-7;

- a) Total ADT
- b) Vehicle Type Distribution
- c) Total HCADT

Segment 23, which has the highest 1990 ADT of the project, has a 1969 ADT of 35,000.

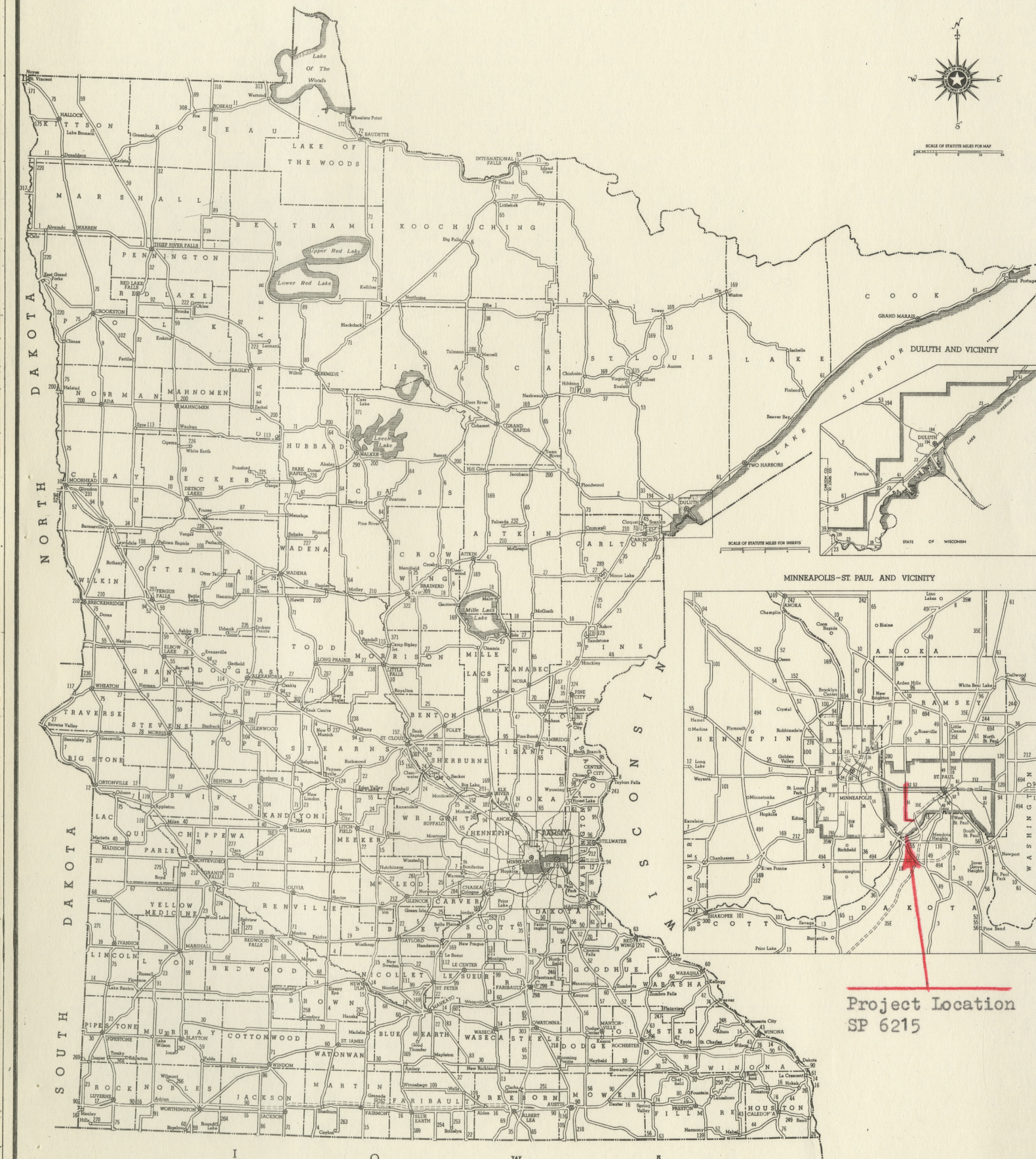
The basic data, method and assumptions used to prepare this report are given on page 8.

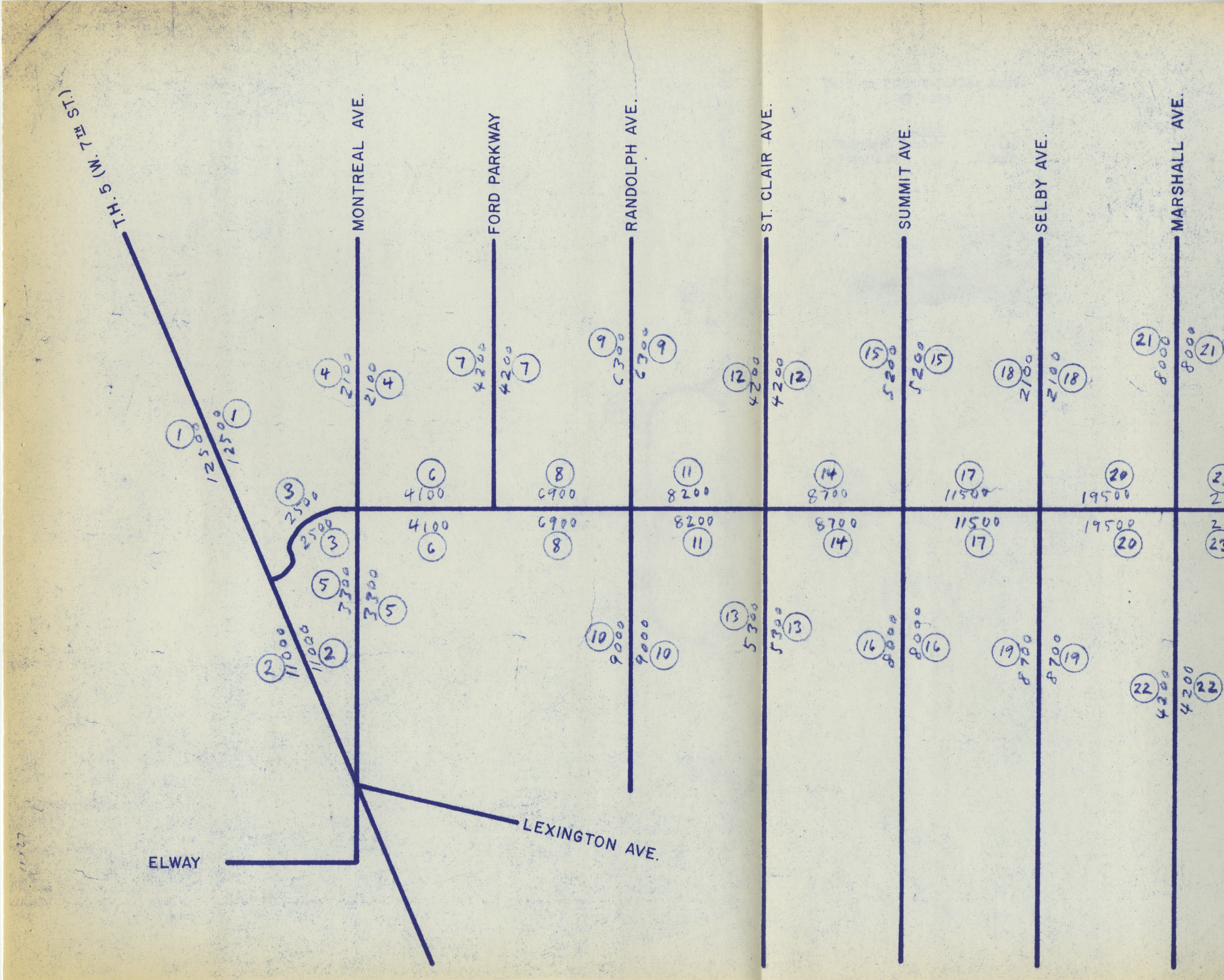
Morris Gildemeister

Morris Gildemeister, Chief
Statewide Planning Section

PH

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS
WORK MAP

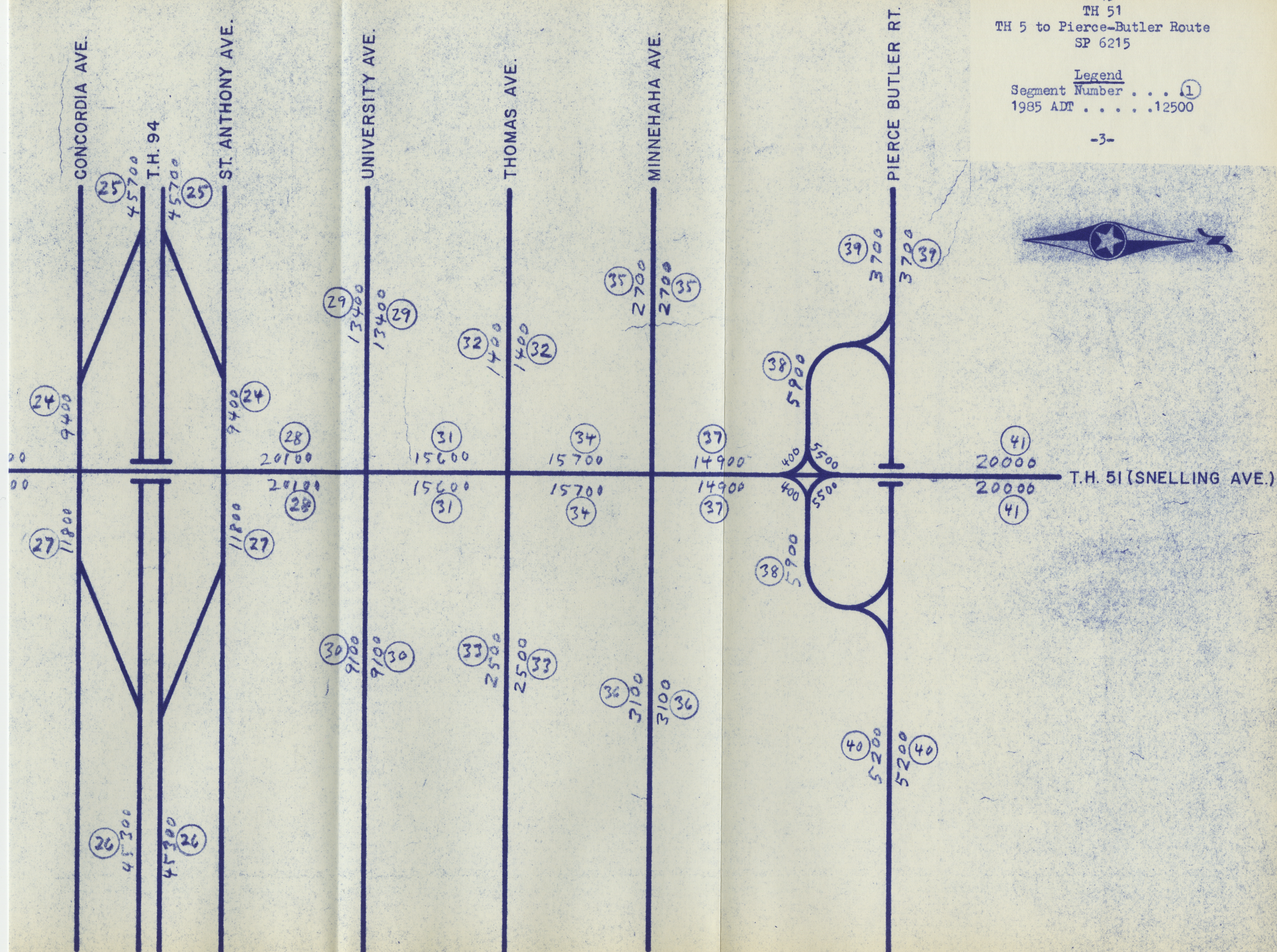




S-45
TH 51
TH 5 to Pierce-Butler Route
SP 6215

Legend
Segment Number ①
1985 ADT 12500

-3-



TRAFFIC ESTIMATE DATA

DESIGN YEAR 1985 PART 1 OF 4

FOR

T.H. 51 S.P. 6215 LENGTH - MILES
COUNTY Ramsey LOCATION TH 5 to Pierce-Butler Route

BASED ON

1985 ADT FROM TRAFFIC ANALYSIS UNIT

SHOWING

TOTAL ADT ON SEGMENTS 1 THROUGH 11 AS
DEFINED ON ATTACHED INDEX MAP

VEHICLE # TYPE	SEGMENT NUMBER										
	1	2	3	4	5	6	7	8	9	10	11
0	11379	9977	2346	1971	3087	3836	3970	6507	5984	8555	7770
1	467	411	85	64	105	130	125	196	144	200	193
2	110	97	22	10	17	21	33	32	42	60	35
3	59	52	9	5	9	11	14	16	19	27	18
4	57	50	10	18	14	17	17	25	23	33	27
5	230	223	11	27	44	55	16	69	57	81	97
6	198	190	17	15	24	30	25	55	31	44	60
TOTAL ADT	12500	11002	2500	2100	3300	4100	4200	6900	6300	9000	8200
TOTAL H. COMM. ADT	1121	1023	154	129	213	264	230	393	316	445	430
TOTAL DHV											
DIRECTIONAL DISTRIBUTION											

* VEHICLE TYPE CODE

- 0 = PASSENGER CARS AND 4 TIRE TRUCKS
1 = SINGLE UNIT-2 AXLE-6 TIRE TRUCKS
2 = SINGLE UNIT-3 AXLE TRUCKS
3 = TRACTOR-TRUCK OR SEMI-TRAILER- 3 AXLES
- 4 = TRACTOR-TRUCK OR SEMI-TRAILER - 4 AXLES
5 = TRACTOR-TRUCK OR SEMI-TRAILER - 5 AXLES
6 = BUSES AND TRUCKS WITH TRAILERS

TRAFFIC ESTIMATE DATA

DESIGN YEAR 1985 PART 2 OF 4

FOR

T.H. 51 S.P. 6215 LENGTH - MILES
COUNTY Ramsey LOCATION TH 5 to Pierce-Butler Route

BASED ON

1985 ADT FROM TRAFFIC ANALYSIS UNIT

SHOWING

TOTAL ADT ON SEGMENTS 12 THROUGH 22 AS
DEFINED ON ATTACHED INDEX MAP

VEHICLE # TYPE	SEGMENT NUMBER										
	12	13	14	15	16	17	18	19	20	21	22
0	4010	5071	8224	4968	7671	10924	11967	8144	18390	7416	3952
1	83	105	209	129	185	253	87	244	480	264	109
2	13	16	39	34	48	40	9	38	76	40	17
3	6	18	19	14	20	23	15	19	38	24	8
4	10	13	29	18	25	35	7	30	60	32	13
5	48	57	105	16	21	127	113	136	272	152	63
6	24	30	76	21	30	93	12	89	178	72	38
TOTAL ADT	4200	5300	8700	5200	8000	11500	2100	8700	19500	8000	4200
TOTAL H. COMM. ADT	181	229	476	232	329	576	133	556	1110	584	248
TOTAL DHV											
DIRECTIONAL DISTRIBUTION											

* VEHICLE TYPE CODE

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2 = SINGLE UNIT-3 AXLE TRUCKS
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- 4 = TRACTOR-TRUCK OR SEMI-TRAILER - 4 AXLES
5 = TRACTOR-TRUCK OR SEMI-TRAILER - 5 AXLES
6 = BUSES AND TRUCKS WITH TRAILERS

TRAFFIC ESTIMATE DATA

DESIGN YEAR 1985 PART 3 OF 4

FOR

T.H. 51 S.P. 6215 LENGTH - MILES
COUNTY Ramsey LOCATION TH 5 to Pierce-Butler Route

BASED ON

1985 ADT FROM TRAFFIC ANALYSIS UNIT

SHOWING

TOTAL ADT ON SEGMENTS 23 THROUGH 33 AS

DEFINED ON ATTACHED INDEX MAP

VEHICLE * TYPE	SEGMENT NUMBER											
	23	24	25	26	27	28	29	30	31	32	33	
0	20080	8908	41360	40926	11194	18948	12277	8329	14740	1311	2327	
1	534	232	1504	1514	288	502	478	326	364	43	80	
2	84	36	524	530	47	78	141	102	55	9	20	
3	42	16	148	150	20	44	62	42	31	5	10	
4	66	26	224	226	31	64	77	53	45	5	11	
5	298	123	1492	1500	144	282	189	109	202	12	21	
6	196	59	448	454	76	182	176	139	163	15	31	
TOTAL ADT	21300	9400	45700	45300	11800	20100	13400	9100	15600	1400	2500	
TOTAL H. COMM. ADT	1220	492	4340	4374	606	1152	1123	771	860	89	173	
TOTAL DHV												
DIRECTIONAL DISTRIBUTION												

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5 = TRACTOR-TRUCK OR SEM-TRAILER - 5 AXLES
6 = BUSES AND TRUCKS WITH TRAILERS

TRAFFIC ESTIMATE DATA

DESIGN YEAR 1985 PART 4 OF 4

FOR

T.H. 51 S.P. 6215 LENGTH - MILES
COUNTY Ramsey LOCATION TH 5 to Pierce-Butler Route

BASED ON

1985 ADT FROM TRAFFIC ANALYSIS UNIT

SHOWING

TOTAL ADT ON SEGMENTS 34 THROUGH 41 AS

DEFINED ON ATTACHED INDEX MAP

VEHICLE * TYPE	SEGMENT NUMBER											
	34	35	36	37	38	39	40	41				
0	14873	2534	2933	14078	5524	3472	4892	18842				
1	357	82	89	347	155	96	125	482				
2	48	18	20	40	59	35	47	93				
3	30	9	5	37	18	10	16	55				
4	42	11	11	42	29	19	26	69				
5	188	18	15	189	85	49	68	266				
6	162	22	27	167	30	19	26	193				
TOTAL ADT	15700	2700	3100	14900	5900	3700	5200	20000				
TOTAL H. COMM. ADT	827	166	167	822	376	228	308	1158				
TOTAL DHV												
DIRECTIONAL DISTRIBUTION												

* VEHICLE TYPE CODE

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5 = TRACTOR-TRUCK OR SEM-TRAILER - 5 AXLES
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Basic Data, Method and Assumptions

The 1990 values may be obtained by expanding the enclosed volumes by 15%.

The 1985 ADT and DHV are presented in SPAR M-31 transmitted August 20, 1970.

The total heavy commercial ADT given in this report was taken from the System 14 network. The vehicle type distribution was developed by applying factors taken from a statewide vehicle type trend study to classification counts made in the study area.